

**NEVADA DIVISION OF ENVIRONMENTAL PROTECTION**  
**FACT SHEET**  
(pursuant to NAC 445A.236)

**Permittee Name:** City of Lovelock  
P.O. Box 238  
Lovelock, NV 89419

**Permit Number:** NV0020311

**Location:** Lovelock Wastewater Treatment Facility (WWTF)  
815 S. Meridian Road  
Lovelock, Pershing County, Nevada  
Latitude: 40° 09' 57"N, Longitude: 118° 28' 33"W  
Township 27N, Range 31E, SE¼ NE¼ Section 34

**General:** The Lovelock WWTF is located approximately ½ mile south of the city limits of Lovelock, Pershing County, Nevada. The main commerce in this region includes farming (e.g., alfalfa, hay), mining, and the Lovelock Correctional Center. Influent is not received from these sources, and the prison is connected to a separate WWTF. The Lovelock WWTF services approximately 2,200 people residing within the city limits. The influent is domestic (sanitary), and there are no industrial connections. Most of the town's influent is received by gravity flow, except for a small number of commercial connections on the south end of the city, which are served by a lift station located below the WWTF.

In January 2001, the facility upgraded its four-aerated/facultative treatment ponds with a 0.6 MGD Sequencing Batch Reactor (SBR) facility. The SBR facility is designed as a 10/10/10 plant, i.e., BOD<sub>5</sub>/TSS/total nitrogen. The O&M Manual indicates that there is also partial phosphorus removal, i.e., luxury uptake. The SBR plant upgrades are now complete except for a mechanically raked barscreen, which will be installed in the headworks sometime later in Fall 2003. Presently, a manually cleaned barscreen removes rags, sticks and trash to protect the pumps. The SBR facility consists of a wet well, two reactor tanks, an aerated sludge digester and a chlorine contactor. After digestion, waste activated sludge is discharged for long-term storage to an HDPE-lined facultative holding basin. The supernatant from this basin is recycled to the reactors. At a design flow of 0.6 MGD, a complete reactor batch cycle consisting of filling, reaction, settling, decanting and idle takes six hours to complete. Since January 2001, effluent quality has improved due to the efficient removal of BOD<sub>5</sub>, discontinuance of pond algal blooms (e.g., lower TSS) and reduction in discharged nutrients (nitrogen and phosphorus).

**Flow:** The SBR facility is designed to produce 10/10/10 effluent at a flow of 0.6 MGD. The 30-day average flow to this WWTF is currently 0.3 MGD. The computer-controlled operating program (i.e., SCADA system) calculates the wastewater flowrate based on the number of times the reactors are filled and the level of influent added each time.

**Receiving Water Characteristics:** Tertiary-treated, disinfected effluent is discharged at the south end of the facility's property to the Lovelock Drain. The Lovelock Drain is an irrigation tailwater ditch that is operated by the Pershing County Water Conservation District. This ditch is one of several ditches in the Lovelock farming district, which drain irrigation supply from the Humboldt River. The Lovelock Drain eventually discharges to the Toulon Sink, which is

located 12 miles southwest of Lovelock. During dry weather, Toulon Sink is a dry lakebed (i.e., desert playa). The WWTF effluent flows in this ditch past the discharge outfall for approximately ¼ mile before dissipating due to percolation and evaporation. In winter to early spring, shallow water accumulates in Toulon Sink from stormwater runoff originating in the Trinity and West Humboldt Ranges, which flank the Toulon Sink. The Lovelock Drain and Toulon Sink are unclassified waters. There are no beneficial uses assigned to these waters. The City of Lovelock and the prison receive their potable water supply from wells located near Oreana, which is located approximately 14 miles northeast of Lovelock.

**Proposed Effluent Limitations and Special Conditions:**

**Table 1: Plant Discharge Limitations**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD	0.6		Continuous	Program Calculation
BOD <sub>5</sub> , mg/L (Influent)	Monitor & Report		Monthly	Discrete
BOD <sub>5</sub> , mg/L (Effluent)	30	45	Monthly	Composite
BOD <sub>5</sub> (% Removal)	85		Monthly	Calculation
TSS, mg/L (Influent)	Monitor & Report		Monthly	Discrete
TSS, mg/L (Effluent)	30	45	Monthly	Composite
TSS (% Removal)	85		Monthly	Calculation
Total Nitrogen as N, mg/L (Effluent)	10.0		Monthly	Composite
Fecal Coliform, cfu or mpn/100 ml (Effluent)	200/100 ml (geometric mean)	400/100 ml	Monthly	Discrete
pH, Std. Units (Effluent)	Between 6.0 – 9.0		Monthly	Discrete

**Rationale for Permit Requirements:** The Division's rationale for the proposed monitoring conditions is as follows:

- *BOD<sub>5</sub>/TSS:* The permit requires secondary treatment (i.e., biological oxidation). NPDES permits also require 85% removal of BOD<sub>5</sub> and TSS.
- *Total Nitrogen:* The SBR facility is designed for year-round removal of total nitrogen to below 10 mg/L. With denitrification, effluent percolation in the Lovelock Drain is not expected to adversely impact the quality of the shallow groundwater in the Lovelock farming district.
- *Fecal Coliform:* The current permit has established fecal coliform limits in the effluent

based on NAC 445A.278 (drip or surface irrigation of landscape). The Lovelock Drain is posted below the outfall for approximately ½ mile on both sides of the ditch. The portion of the ditch where effluent is present runs through the back-end of several commercial businesses and farm fields, and general public access is reasonably restricted, i.e., zoning, fencing and signs.

**Schedule of Compliance:** The Permittee shall submit the following items to the Division for review and approval (**all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control**):

- Within sixty (60) days upon installation of the new mechanical screen and screenings screw conveyor in the headworks, the Permittee shall prepare and submit an addendum section for this equipment in the Operations and Maintenance (O&M) Manual.

**Procedures for Public Comment:** The Notice of the Division's intent to issue (renew) an NPDES discharge permit to the City of Lovelock, subject to the conditions contained within the permit is being sent to the **Lovelock Review-Miner** and **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **September 19, 2003 by 5:00 P.M.** A copy of the public notice and fact sheet can also be downloaded from the Division's website at the following address: <http://ndep.nv.gov/admin/public.htm>

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

**Proposed Determination:** The Division has made the tentative determination to issue (renew) the proposed NPDES discharge permit for a period of five (5) years.

Prepared by: Mark A. Kaminski, P.E.  
Staff Engineer III  
Bureau of Water Pollution Control

Date: August 18, 2003

**LOVELOCK WWTE (JUNE 27, 2003)**



#1. New barscreen equipment (Fall 2003)



#4. HDPE-lined sludge holding pond



#2. SBR Facility (reactors/digester/chlorine contactor)



#5. Lovelock Drain Outfall (0.3 MGD)



#3. Mixed liquor in react mode (mixing/aeration)



#6. Toulon Sink Playa (12 mi. from Lovelock)